POS MV™ 320 SPECIFICATIONS

MAXIMIZE YOUR ROI WITH POS MV 320

POS MV 320 is a user-friendly, turnkey system designed and built to provide accurate attitude, heading, heave, position, and velocity data of your marine vessel and onboard sensors. POS MV is proven in all conditions, and is the georeferencing and motion compensation solution of choice for the hydrographic professional.

POS MV blends GNSS data with angular rate and acceleration data from an IMU and heading from the GPS Azimuth Measurement System (GAMS) to produce a robust and accurate full six degrees-of-freedom position and orientation solution.

PERFORMANCE SUMMARY - POS MV 320 ACCURACY

POS MV 320	DGPS	RTK	Accuracy During GNSS Outage
Position	0.5 - 2 m[1]	Horizontal: +/- (8 mm + 1 ppm x baseline length)[2] Vertical: +/- (15 mm + 1 ppm x baseline length)[2]	~ 6 m for 60 s total outages (DGPS) ~ 3 m for 60 s total outages (RTK) ~ 2 m for 60 s (post-processed DGNSS) ~ 1 m for 60 s total outages (IAPPK)
Roll & Pitch	0.02°	0.01° (0.008° with post processing)	0.02°
True Heading	0.01° with 4 m baseline 0.02° with 2 m baseline	-	1° per hour degradation (negligible for outages <60 s)
Heave TrueHeave™	5 cm or 5%[3] 2 cm or 2%[4]	5 cm or 5%[3] 2 cm or 2%[4]	5 cm or 5%[3] 2 cm or 2%[4]

PCS OPTIONS

COMPONENT	DIMENSIONS	WEIGHT	TEMPERATURE	HUMIDITY	POWER
Rack Mount PCS	L = 442mm, W = 356mm, H =46mm	3.9 kg	-20 ºC to +70 ºC	10 - 80% RH	AC 120/230 V, 50/60 Hz, auto-switching 40 W
Small Form Factor PCS	L = 167mm, W = 185mm, H = 68mm	2.5 kg	-20 ºC to +60 ºC	0- 100% RH	DC 10-34 V, 35 W (peak)

INERTIAL MEASUREMENT UNIT (IMU)

ENCLOSURE	DIMENSIONS	WEIGHT	TEMPERATURE	IP RATING
Between Decks	L = 158 mm, W = 158 mm, H = 124 mm	2.5 kg	-40 ºC to +60 ºC	IP65
Between Decks	L = 150 mm, W = 130 mm, H = 148 mm	2.8 kg	-40 ºC to +60 ºC	IP65
Submersible	Ø172 mm X 206 mm (base plate Ø209 mm)	3.9 kg	-40 ºC to +60 ºC	IP68

GLOBAL NAVIGATION SATELLITE SYSTEM (GNSS)

COMPONENT	DIMENSIONS	WEIGHT	TEMPERATURE	HUMIDITY
GNSS Antenna	Ø178 mm, W = 73 mm	0.45 kg	-50 ºC to +70 ºC	0-100% RH

[1] Depending on quality of differential corrections
[2] Assumes 1 m IMU-GNSS antenna offset
[3] Whichever is greater, for periods of 20 seconds or less
[4] Whichever is greater, for periods of 35 seconds or less

1. ETHERNET INPUT OUTPUT

Ethernet	(10/100 base-T)
Parameters	Time tag, status, position, attitude, heave, velocity, track and speed, dynamics, performance metrics, raw IMU data, raw GNSS data
Display Port	Low rate (1 Hz) UDP protocol output
Control Port	TCP/IP input for system commands
Primary Port	Real-time (up to 200 Hz) UDP protocol output
Secondary Port	Buffered TCP/IP protocol output for data logging to external device

2. SERIAL RS232 INPUT OUTPUT

5 COM Ports	User assignable to: NMEA output (0-5), Binary output (0-5), Auxiliary GNSS input (0-2), Base GNSS correction input (0-2)

3. NMEA ASCII OUTPUT

Parameters	NMEA Standard ASCII messages: Position ($INGGA), Heading ($INHDT), Track and Speed ($INVTG), Statistics ($INGST), Attitude ($PASHR, $PRDID), Time and Date ($INZDA, $UTC)
Rate	Up to 50 Hz (user selectable)
Configuration	Output selections and rate individually configurable on each assigned com port

4. HIGH RATE ATTITUDE OUTPUT

Parameters	User selectable binary messages: attitude, heading, speed
Rate	Up to 200 Hz (user selectable)
Configuration	Output selections and rate individually configurable on each assigned com port

5. AUXILIARY GNSS INPUTS

Parameters	NMEA Standard ASCII messages: $GPGGA, $GPGST, $GPGSA, $GPGSV Uses Aux input with best quality
Rate	1 Hz

6. BASE GNSS CORRECTION INPUTS

Parameters	RTCM V2.x, RTCM V3.x, CMR and CMR+, CMRx input formats accepted. Combined with raw GNSS observables in navigation solution
Rate	1 Hz

7. DIGITAL I/O

1PPS	1 pulse-per-second Time Sync output, normally high, active low pulse
Event Input (2)	Time mark of external events. TTL pulses > 1 msec width, rising or falling edge, max rate 200 Hz

8. USER SUPPLIED EQUIPMENT

- PC for POSView Software (Required for configuration): Pentium 90 processor (minimum), 16 MB RAM, 1 MB free disk space, Ethernet adapter (RJ45 100 base T), Windows 98/2000/NT/XP/Windows 7
- PC for POSPac MMS Post-processing Software: Pentium III 800Mhz or equivalent (minimum), 512 MB RAM, 400 MB free disk space, USB Port (For Security Key), Windows XP or Windows 7

Scan the QR Code on your mobile device to access information on POS MV

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